

SEQUENCE LISTING

<110> STUBBS, Simon L.  
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<120> CYTOCHROME C PROTEIN AND ASSAY

<130> PA0394

<140> TO BE ASSIGNED

<141> 2006-06-19

<150> PCT/GB2004/005317

<151> 2004-12-17

<150> GB 0329353.7

<151> 2003-12-19

<160> 15

<170> PatentIn version 3.3

<210> 1

<211> 315

<212> DNA

<213> Homo sapiens

<400> 1

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acaggtcagg cccctggata ctcttacaca gccgccaata agaacaaagg catcatctgg	180
ggagaggata cactgatgga gtatttggag aatcccaaga agtacatccc tggaacaaaa	240
atgatctttg tcggcattaa gaagaaggaa gaaagggcag acttaatagc ttatctcaaa	300
aaagctacta atgag	315

<210> 2

<211> 105

<212> PRT

<213> Homo sapiens

<400> 2

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Gln	Cys	His	Thr	Val	Glu	Lys	Gly	Gly	Lys	His	Lys	Thr	Gly	Pro	Asn
			20					25					30		

Leu	His	Gly	Leu	Phe	Gly	Arg	Lys	Thr	Gly	Gln	Ala	Pro	Gly	Tyr	Ser
		35					40					45			

Tyr	Thr	Ala	Ala	Asn	Lys	Asn	Lys	Gly	Ile	Ile	Trp	Gly	Glu	Asp	Thr
50						55					60				

Leu Met Glu Tyr Leu Glu Asn Pro Lys Lys Tyr Ile Pro Gly Thr Lys  
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Met Ile Phe Val Gly Ile Lys Lys Lys Glu Glu Arg Ala Asp Leu Ile  
85 90 95

Ala Tyr Leu Lys Lys Ala Thr Asn Glu  
100 105

<210> 3  
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<220>  
<223> Synthetic oligonucleotide

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aaacttacc ttaaatttat ttgcactact ggaaaactac ctgttccatg gccaacactt 180  
gtcactactc tctcttatgg tgttcaatgc ttttcaagat acccagatca tatgaaacgg 240  
catgactttt tcaagagtgc catgcccgaagggttatgtac aggaaagaac tatatttttc 300  
aaagatgacg ggaactacaa gacacgtgct gaagtcaagt ttgaagggtga tacccttggt 360  
aatagaatcg agttaaaagg tattgatattt aaagaagatg gaaacattct tggacacaaa 420  
ttggaataca actataactc acacaatgta tacatcatgg cagacaaaca aaagaatgga 480  
atcaaagtta acttcaaaat tagacacaac attgaagatg gaggcgttca actagcagac 540  
cattatcaac aaaatactcc aattggcgat ggccctgtcc ttttaccaga caaccattac 600  
ctgtccacac aatctgccct ttcgaaagat cccaacgaaa agagagacca catggtcctt 660  
cttggctttg taacagctgc tgggattaca catggcatgg atgaactata caaactcgag 720  
aattcgacca tgggtgatgt tgagaaaggc aagaagattt ttattatgaa gtgttcccag 780  
tgccacaccg ttgaaaaggg aggcaagcac aagactgggc caaatctcca tgggtctctt 840  
gggcggaaga caggtcaggc ccctggatac tcttacacag ccgccaataa gaacaaaggc 900  
atcatctggg gagaggatac actgatggag tatttgagaga atcccgcgca gtacatccct 960  
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<210> 4  
<211> 348  
<212> PRT  
<213> Artificial sequence

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<223> Synthetic polypeptide

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Met Ser Lys Gly Glu Glu Leu Phe Thr Gly Val Val Pro Ile Leu Val  
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Glu Leu Asp Gly Asp Val Asn Gly His Lys Phe Ser Val Ser Gly Glu  
20 25 30

Gly Glu Gly Asp Ala Thr Tyr Gly Lys Leu Thr Leu Lys Phe Ile Cys  
35 40 45

Thr Thr Gly Lys Leu Pro Val Pro Trp Pro Thr Leu Val Thr Thr Leu  
50 55 60

Ser Tyr Gly Val Gln Cys Phe Ser Arg Tyr Pro Asp His Met Lys Arg  
65 70 75 80

His Asp Phe Phe Lys Ser Ala Met Pro Glu Gly Tyr Val Gln Glu Arg  
85 90 95

Thr Ile Phe Phe Lys Asp Asp Gly Asn Tyr Lys Thr Arg Ala Glu Val  
100 105 110

Lys Phe Glu Gly Asp Thr Leu Val Asn Arg Ile Glu Leu Lys Gly Ile  
115 120 125

Asp Phe Lys Glu Asp Gly Asn Ile Leu Gly His Lys Leu Glu Tyr Asn  
130 135 140

Tyr Asn Ser His Asn Val Tyr Ile Met Ala Asp Lys Gln Lys Asn Gly  
145 150 155 160

Ile Lys Val Asn Phe Lys Ile Arg His Asn Ile Glu Asp Gly Gly Val  
165 170 175

Gln Leu Ala Asp His Tyr Gln Gln Asn Thr Pro Ile Gly Asp Gly Pro  
180 185 190

Val Leu Leu Pro Asp Asn His Tyr Leu Ser Thr Gln Ser Ala Leu Ser  
195 200 205

Lys Asp Pro Asn Glu Lys Arg Asp His Met Val Leu Leu Gly Phe Val  
210 215 220

Thr Ala Ala Gly Ile Thr His Gly Met Asp Glu Leu Tyr Lys Leu Glu  
225 230 235 240

Asn Ser Thr Met Gly Asp Val Glu Lys Gly Lys Lys Ile Phe Ile Met

245

250

255

Lys Cys Ser Gln Cys His Thr Val Glu Lys Gly Gly Lys His Lys Thr  
 260 265 270

Gly Pro Asn Leu His Gly Leu Phe Gly Arg Lys Thr Gly Gln Ala Pro  
 275 280 285

Gly Tyr Ser Tyr Thr Ala Ala Asn Lys Asn Lys Gly Ile Ile Trp Gly  
 290 295 300

Glu Asp Thr Leu Met Glu Tyr Leu Glu Asn Pro Ala Lys Tyr Ile Pro  
 305 310 315 320

Gly Thr Lys Met Ile Phe Val Gly Ile Lys Lys Lys Glu Glu Arg Ala  
 325 330 335

Asp Leu Ile Ala Tyr Leu Lys Lys Ala Thr Asn Glu  
 340 345

&lt;210&gt; 5

&lt;211&gt; 1041

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; synthetic oligonucleotide

&lt;400&gt; 5

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gttgaaaagg gaggcaagca caagactggg ccaaactctcc atggtctctt tgggcggaag	120
acaggtcagg cccctggata ctcttacaca gccgccaata agaacaaagg catcatctgg	180
ggagaggata cactgatgga gtatttgagg aatcccgcga agtacatccc tggaacaaaa	240
atgatctttg tcggcattaa gaagaaggaa gaaagggcag acttaatagc ttatctcaaa	300
aaagctacta atgaggggtcg acccggggatg agtaaaggag aagaactttt cactggagtt	360
gtcccaattc ttgttgaatt agatggtgat gttaatgggc acaaattttc tgtcagtgga	420
gaggggtgaag gtgatgcaac atacggaaaa cttaccctta aatttatttg cactactgga	480
aaactacctg ttccatggcc aacacttgct actactctct cttatggtgt tcaatgcttt	540
tcaagatacc cagatcatat gaaacggcat gactttttca agagtgccat gcccgaaggt	600
tatgtacagg aaagaactat atttttcaaa gatgacggga actacaagac acgtgctgaa	660
gtcaagtttg aaggtgatac ccttggttaat agaatcgagt taaaaggat tgattttaaa	720
gaagatggaa acattcttgg acacaaattg gaatacaact ataactcaca caatgtatac	780
atcatggcag acaaacaaaa gaatggaatc aaagttaact tcaaaattag acacaacatt	840
gaagatggag gcgttcaact agcagaccat tatcaacaaa atactccaat tggcgatggc	900

cctgtccttt taccagacaa ccattacctg tccacacaat ctgccctttc gaaagatccc 960  
 aacgaaaaga gagaccacat ggtccttctt ggctttgtaa cagctgctgg gattacacat 1020  
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<210> 6  
 <211> 347  
 <212> PRT  
 <213> Artificial sequence

<220>  
 <223> Synthetic polypeptide

<400> 6

Met Gly Asp Val Glu Lys Gly Lys Lys Ile Phe Ile Met Lys Cys Ser  
 1 5 10 15

Gln Cys His Thr Val Glu Lys Gly Gly Lys His Lys Thr Gly Pro Asn  
 20 25 30

Leu His Gly Leu Phe Gly Arg Lys Thr Gly Gln Ala Pro Gly Tyr Ser  
 35 40 45

Tyr Thr Ala Ala Asn Lys Asn Lys Gly Ile Ile Trp Gly Glu Asp Thr  
 50 55 60

Leu Met Glu Tyr Leu Glu Asn Pro Ala Lys Tyr Ile Pro Gly Thr Lys  
 65 70 75 80

Met Ile Phe Val Gly Ile Lys Lys Lys Glu Glu Arg Ala Asp Leu Ile  
 85 90 95

Ala Tyr Leu Lys Lys Ala Thr Asn Glu Gly Arg Pro Gly Met Ser Lys  
 100 105 110

Gly Glu Glu Leu Phe Thr Gly Val Val Pro Ile Leu Val Glu Leu Asp  
 115 120 125

Gly Asp Val Asn Gly His Lys Phe Ser Val Ser Gly Glu Gly Glu Gly  
 130 135 140

Asp Ala Thr Tyr Gly Lys Leu Thr Leu Lys Phe Ile Cys Thr Thr Gly  
 145 150 155 160

Lys Leu Pro Val Pro Trp Pro Thr Leu Val Thr Thr Leu Ser Tyr Gly  
 165 170 175

Val Gln Cys Phe Ser Arg Tyr Pro Asp His Met Lys Arg His Asp Phe  
 180 185 190

Phe Lys Ser Ala Met Pro Glu Gly Tyr Val Gln Glu Arg Thr Ile Phe  
195 200 205

Phe Lys Asp Asp Gly Asn Tyr Lys Thr Arg Ala Glu Val Lys Phe Glu  
210 215 220

Gly Asp Thr Leu Val Asn Arg Ile Glu Leu Lys Gly Ile Asp Phe Lys  
225 230 235 240

Glu Asp Gly Asn Ile Leu Gly His Lys Leu Glu Tyr Asn Tyr Asn Ser  
245 250 255

His Asn Val Tyr Ile Met Ala Asp Lys Gln Lys Asn Gly Ile Lys Val  
260 265 270

Asn Phe Lys Ile Arg His Asn Ile Glu Asp Gly Gly Val Gln Leu Ala  
275 280 285

Asp His Tyr Gln Gln Asn Thr Pro Ile Gly Asp Gly Pro Val Leu Leu  
290 295 300

Pro Asp Asn His Tyr Leu Ser Thr Gln Ser Ala Leu Ser Lys Asp Pro  
305 310 315 320

Asn Glu Lys Arg Asp His Met Val Leu Leu Gly Phe Val Thr Ala Ala  
325 330 335

Gly Ile Thr His Gly Met Asp Glu Leu Tyr Lys  
340 345

<210> 7  
<211> 1044  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> synthetic oligonucleotide

<400> 7  
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aaacttacc ttaaatttat ttgcactact ggaaaactac ctgttccatg gccaacactt 180  
gtcactactc tctcttatgg tgttcaatgc ttttcaagat acccagatca tatgaaacgg 240  
catgactttt tcaagagtgc catgcccga ggttatgtac aggaaagaac tatatttttc 300  
aaagatgacg ggaactacaa gacacgtgct gaagtcaagt ttgaagggtga tacccttggt 360  
aatagaatcg agttaaaagg tattgatttt aaagaagatg gaaacattct tggacacaaa 420  
ttggaataca actataactc acacaatgta tacatcatgg cagacaaaca aaagaatgga 480

atcaaagtta acttcaaaat tagacacaac attgaagatg gaggcgttca actagcagac	540
cattatcaac aaaataactcc aattggcgat ggcctgtcc ttttaccaga caaccattac	600
ctgtccacac aatctgccct ttcgaaagat cccaacgaaa agagagacca catggtcctt	660
cttggtctttg taacagctgc tgggattaca catggcatgg atgaactata caaactcgag	720
aattcgacca tgggtgatgt tgagaaaggc aagaagattt ttattatgaa gtgttcccag	780
tgccacaccg ttgaaaaggg aggcaagcac aagactgggc caaatctcca tgggtctcttt	840
gggcggaaga caggtcaggc ccctggatac tcttacacag ccgccaataa gaacaaaggc	900
atcatctggg gagaggatac actgatggag tatttgagaa atcccaagaa gtacatccct	960
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tatctcaaaa aagctactaa tgag	1044

<210> 8  
 <211> 348  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic polypeptide

<400> 8

Met	Ser	Lys	Gly	Glu	Glu	Leu	Phe	Thr	Gly	Val	Val	Pro	Ile	Leu	Val
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Glu	Leu	Asp	Gly	Asp	Val	Asn	Gly	His	Lys	Phe	Ser	Val	Ser	Gly	Glu
			20					25					30		

Gly	Glu	Gly	Asp	Ala	Thr	Tyr	Gly	Lys	Leu	Thr	Leu	Lys	Phe	Ile	Cys
		35					40					45			

Thr	Thr	Gly	Lys	Leu	Pro	Val	Pro	Trp	Pro	Thr	Leu	Val	Thr	Thr	Leu
	50					55					60				

Ser	Tyr	Gly	Val	Gln	Cys	Phe	Ser	Arg	Tyr	Pro	Asp	His	Met	Lys	Arg
65					70					75				80	

His	Asp	Phe	Phe	Lys	Ser	Ala	Met	Pro	Glu	Gly	Tyr	Val	Gln	Glu	Arg
				85					90					95	

Thr	Ile	Phe	Phe	Lys	Asp	Asp	Gly	Asn	Tyr	Lys	Thr	Arg	Ala	Glu	Val
			100					105						110	

Lys	Phe	Glu	Gly	Asp	Thr	Leu	Val	Asn	Arg	Ile	Glu	Leu	Lys	Gly	Ile
		115					120					125			

Asp	Phe	Lys	Glu	Asp	Gly	Asn	Ile	Leu	Gly	His	Lys	Leu	Glu	Tyr	Asn
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130

135

140

Tyr Asn Ser His Asn Val Tyr Ile Met Ala Asp Lys Gln Lys Asn Gly  
 145 150 155 160

Ile Lys Val Asn Phe Lys Ile Arg His Asn Ile Glu Asp Gly Gly Val  
 165 170 175

Gln Leu Ala Asp His Tyr Gln Gln Asn Thr Pro Ile Gly Asp Gly Pro  
 180 185 190

Val Leu Leu Pro Asp Asn His Tyr Leu Ser Thr Gln Ser Ala Leu Ser  
 195 200 205

Lys Asp Pro Asn Glu Lys Arg Asp His Met Val Leu Leu Gly Phe Val  
 210 215 220

Thr Ala Ala Gly Ile Thr His Gly Met Asp Glu Leu Tyr Lys Leu Glu  
 225 230 235 240

Asn Ser Thr Met Gly Asp Val Glu Lys Gly Lys Lys Ile Phe Ile Met  
 245 250 255

Lys Cys Ser Gln Cys His Thr Val Glu Lys Gly Gly Lys His Lys Thr  
 260 265 270

Gly Pro Asn Leu His Gly Leu Phe Gly Arg Lys Thr Gly Gln Ala Pro  
 275 280 285

Gly Tyr Ser Tyr Thr Ala Ala Asn Lys Asn Lys Gly Ile Ile Trp Gly  
 290 295 300

Glu Asp Thr Leu Met Glu Tyr Leu Glu Asn Pro Lys Lys Tyr Ile Pro  
 305 310 315 320

Gly Thr Lys Met Ile Phe Val Gly Ile Lys Lys Lys Glu Glu Arg Ala  
 325 330 335

Asp Leu Ile Ala Tyr Leu Lys Lys Ala Thr Asn Glu  
 340 345

<210> 9

<211> 1041

<212> DNA

<213> Artificial sequence

<220>

<223> synthetic oligonucleotide

<400> 9

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acaggtcagg cccctggata ctcttacaca gccgccaata agaacaaagg catcatctgg	180
ggagaggata cactgatgga gtatttggag aatcccaaga agtacatccc tggacaacaaa	240
atgatctttg tcggcattaa gaagaaggaa gaaagggcag acttaatagc ttatctcaaa	300
aaagctacta atgaggggtcg acccggggatg agtaaaggag aagaactttt cactggagtt	360
gtcccaattc ttgttgaatt agatggtgat gttaatgggc acaaattttc tgtcagtgga	420
gaggggtgaag gtgatgcaac atacggaaaa cttaccctta aatttatttg cactactgga	480
aaactacctg ttccatggcc aacacttgtc actactctct cttatggtgt tcaatgcttt	540
tcaagatacc cagatcatat gaaacggcat gactttttca agagtgccat gcccgaagg	600
tatgtacagg aaagaactat atttttcaaa gatgacggga actacaagac acgtgctgaa	660
gtcaagtttg aaggtgatac ccttggtaat agaatcgagt taaaaggtat tgattttaaa	720
gaagatggaa acattcttgg acacaaattg gaatacaact ataactcaca caatgtatac	780
atcatggcag acaaacacaaa gaatggaatc aaagttaact tcaaaattag acacaacatt	840
gaagatggag gcgttcaact agcagaccat tatcaacaaa atactccaat tggcgatggc	900
cctgtccttt taccagacaa ccattacctg tccacacaat ctgccctttc gaaagatccc	960
aacgaaaaga gagaccacat ggtccttctt ggctttgtaa cagctgctgg gattacacat	1020
ggcatggatg aactatacaa a	1041

<210> 10  
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 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic polypeptide  
 <400> 10

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Gln	Cys	His	Thr	Val	Glu	Lys	Gly	Gly	Lys	His	Lys	Thr	Gly	Pro	Asn
			20					25					30		

Leu	His	Gly	Leu	Phe	Gly	Arg	Lys	Thr	Gly	Gln	Ala	Pro	Gly	Tyr	Ser
		35					40					45			

Tyr	Thr	Ala	Ala	Asn	Lys	Asn	Lys	Gly	Ile	Ile	Trp	Gly	Glu	Asp	Thr
	50					55					60				

Leu	Met	Glu	Tyr	Leu	Glu	Asn	Pro	Lys	Lys	Tyr	Ile	Pro	Gly	Thr	Lys
65					70					75					80

Met Ile Phe Val Gly Ile Lys Lys Lys Glu Glu Arg Ala Asp Leu Ile  
 85 90 95  
 Ala Tyr Leu Lys Lys Ala Thr Asn Glu Gly Arg Pro Gly Met Ser Lys  
 100 105 110  
 Gly Glu Glu Leu Phe Thr Gly Val Val Pro Ile Leu Val Glu Leu Asp  
 115 120 125  
 Gly Asp Val Asn Gly His Lys Phe Ser Val Ser Gly Glu Gly Glu Gly  
 130 135 140  
 Asp Ala Thr Tyr Gly Lys Leu Thr Leu Lys Phe Ile Cys Thr Thr Gly  
 145 150 155 160  
 Lys Leu Pro Val Pro Trp Pro Thr Leu Val Thr Thr Leu Ser Tyr Gly  
 165 170 175  
 Val Gln Cys Phe Ser Arg Tyr Pro Asp His Met Lys Arg His Asp Phe  
 180 185 190  
 Phe Lys Ser Ala Met Pro Glu Gly Tyr Val Gln Glu Arg Thr Ile Phe  
 195 200 205  
 Phe Lys Asp Asp Gly Asn Tyr Lys Thr Arg Ala Glu Val Lys Phe Glu  
 210 215 220  
 Gly Asp Thr Leu Val Asn Arg Ile Glu Leu Lys Gly Ile Asp Phe Lys  
 225 230 235 240  
 Glu Asp Gly Asn Ile Leu Gly His Lys Leu Glu Tyr Asn Tyr Asn Ser  
 245 250 255  
 His Asn Val Tyr Ile Met Ala Asp Lys Gln Lys Asn Gly Ile Lys Val  
 260 265 270  
 Asn Phe Lys Ile Arg His Asn Ile Glu Asp Gly Gly Val Gln Leu Ala  
 275 280 285  
 Asp His Tyr Gln Gln Asn Thr Pro Ile Gly Asp Gly Pro Val Leu Leu  
 290 295 300  
 Pro Asp Asn His Tyr Leu Ser Thr Gln Ser Ala Leu Ser Lys Asp Pro  
 305 310 315 320  
 Asn Glu Lys Arg Asp His Met Val Leu Leu Gly Phe Val Thr Ala Ala  
 325 330 335

Gly Ile Thr His Gly Met Asp Glu Leu Tyr Lys  
340 345

<210> 11  
<211> 34  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide primer

<400> 11  
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<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide primer

<400> 12  
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<210> 13  
<211> 34  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide primer

<400> 13  
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<210> 14  
<211> 41  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide primer

<400> 14  
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<210> 15  
<211> 41  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide primer

<400> 15  
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